

System Characteristics:

Emission - Frequency modulation 10 F9 *with frequency modulation generator*  
Bandwidth - 300 - 5000 cps *cycles per second*  
Storage capability - seven 60 wpm teletype channels for a total transmission time of four minutes. Also capable of four minutes storage of speech or other analog information within bandwidth limitations.

Total weight of satellite package including mechanical mountings and inter-connecting harness but exclusive of antennas:  $35\frac{1}{2}$  pounds.

Environmental Capability:

Temperature Limits -  $40^{\circ}\text{F}$  to  $120^{\circ}\text{F}$   
Mechanical - 20 to 2000 cps at 20 g's, total excursion  $\frac{1}{4}"$   
Overall dimensions for possible satellite configuration:  $25\frac{1}{2}"$  X  $9\frac{1}{2}"$  X  $10"$

Beacon Transmitter:

Power output - 20 milliwatts  
Output Impedance - 50 ohms  
Telemetry capability - Temperature variations in the  $-20^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$  or  $0^{\circ}\text{C}$  to  $200^{\circ}\text{C}$  range  
Input power - 250 milliwatts  
Input voltage - 18, -6 volts.  
Dimensions:  $1\frac{3}{8}$  by 5" diameter  
Fully transistorized  
Frequency - crystal controlled, nominal 108 mcs

Control Unit:

Provides selections filters for control tones and necessary switching circuitry for three modes of operation.  
Fully transistorized  
Dimensions  $4\frac{5}{8}"$  X  $3\frac{7}{8}"$  X  $1\frac{3}{4}"$

Transmitter:

Power output - 8 watts  
Output impedance - 50 ohms *1 volt*  
Modulation ~~inactivity~~ *lv* across 3000 ohms for full deviation  
Input power - 39 watts  
Input voltages - -6,  $\pm 135$  and 270 vdc  
Dimensions:  $6\frac{1}{4}"$  X  $4\frac{1}{4}"$  X  $4\frac{1}{2}"$   
No. of tubes - 9  
Frequency - crystal controlled, nominal 132 mcs.

Receiver:

Sensitivity - 2 micro-volts for 20 db quieting  
Input Impedance - 50 ohms  
Output level - 0.5 volt across 1000 ohms for fully deviated signal  
Input power - 25 milliwatts  
Input voltage - -12 volts  
Dimensions -  $3\frac{1}{2}$ " X  $4\frac{1}{2}$ " X 1"  
Fully transistorized  
Frequency - crystal controlled, nominal 150 mcs

DC - DC Converter:

Input power -  $37\frac{1}{2}$  watts  
Input voltage - -18 volts  
Output power - 30 watts  
Output voltage -  $\pm 135$   $\pm 270$  volts  
Dimensions  $4\frac{1}{8}$ " X  $9\frac{3}{4}$ " X 2"  
Fully transistorized

Battery Supply:

Type - zinc silver oxide cells  
Capacity - 960 watts hours  
Dimensions 13" X 6" X  $5\frac{1}{4}$ "  
Output voltages -0,-6,-7.5, -12, -18 volts